



Business Consulting Services

Driving Organizational Performance Through Knowledge

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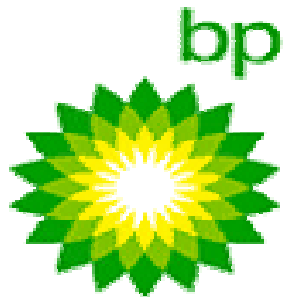
Over the last several years, knowledge has been recognized as a critical strategic resource



We bring good things to life.

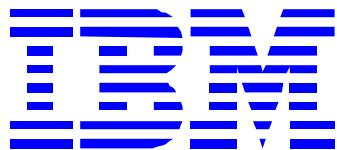
“An organization’s ability to learn and translate that learning into action rapidly, is the ultimate competitive business advantage

- Jack Welch



“...In order to generate extraordinary value for shareholders, a company has to learn better than its competition and apply that knowledge faster...”

- John Browne



“ I believe that future leadership companies and future leadership institutions of all kinds will be those that know how to compete and win on the basis of knowledge -- learning, adapting and improving the use of this vital asset.”

- Louis Gerstner

While leveraging knowledge is not a “new” idea, economic forces are requiring companies to better utilize their knowledge assets

Why Knowledge Plays a Critical Role in Today's Economy

- **Globalization**
 - Greater need to leverage employee knowledge around the world
 - Increased difficulty in traveling and maintaining face-to-face connections
- **Rise of partnerships, joint ventures and alliances**
 - Critical knowledge likely exist outside of the organization's boundaries
 - Over 50% of alliances of alliances not successful

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Why Knowledge Plays a Critical Role in Today's Economy (continued)

- **Increase in product/service complexity**
 - Employees need more knowledge to meet customer expectations
 - Customers have more choices and require greater assistance to differentiate between offerings
- **Changes in workforce demographics and career patterns**
 - 19% of the entire American workforce holding executive, administrative and managerial positions will retire by 2008
 - Of 5,000 executives surveyed by the Hay Group in 2001, 46% said they expected to remain in their position for only two to five years
 - It is estimated that 1 in 6 Americans (appx. 25 million) are self-employed, independent contractors or work for a temporary agency

A number of US Government agencies are at risk for losing significant numbers of senior employees to retirement

Retirement Eligibility in Government Service by 2005

- More than 50% of all federal employees will be eligible for retirement
 - 71% of the Senior Executive Service (highest ranking career professionals) will be eligible
 - 58% at the GS-15 level
 - 41% at the GS-14 level
- 25% of the Internal Revenue Service (approximately 25,000 people)
- By 2005, 39% of the total civilian workforce of the Department of Defense
- More than 45% of the Air Force's civilian staff of 165,000

Source: Beazley, et. al, *Continuity Management*



“The federal work force is in a crisis. And nowhere is this erosion more evident or potentially more dangerous, than in our national security establishment...if we fail to respond to the formidable human capital challenges...in a thoughtful and deliberate manner, then our best strategies and billion-dollar weapon systems will afford us little protection in an already uncertain future.”

Senator George Voinovich (Ohio)
March 28, 2001

What Do We Mean By Managing Knowledge?

Knowledge Management Definition

Knowledge management is a **discipline** that uses a company's **content**, **connections** and **expertise** to increase **organizational effectiveness**.

Knowledge management enables organizations to more effectively **locate**, **create**, **share** and **apply** the knowledge of its **employees**, **customers**, **partners** and other key constituents.

Knowledge takes different forms and therefore requires different techniques to ensure it is managed effectively

Different Knowledge Types

Explicit knowledge in documents, emails and other written forms



How do I install a new software program?

Tacit knowledge located in the experience of individuals, networks and communities



How do I manage a complicated application development project?

Embedded knowledge in work routines, practices and norms



How do I migrate a system from development to production?

A focus on managing knowledge is often necessary because of inherent boundaries between knowledge seekers and sources

Common Knowledge Challenges

	Awareness	Access	Application	Perception
Knowledge Seeker	<i>How do I find out who knows something about this?</i>	<i>How do I get this person to return my call?</i>	<i>How can I apply this knowledge to solve my problem?</i>	<i>How do I make sure I don't look foolish by asking for help?</i>
Knowledge Source	<i>How do I find out who might be interested in this?</i>	<i>How do I get all these people to stop calling me?</i>	<i>How do I make sure my knowledge isn't being misunderstood or misused?</i>	<i>How do I ensure that I am recognized for helping others?</i>

Applying Knowledge to Improve Organizational Effectiveness

Knowledge-based initiatives can play a role in helping organizations improve their organizational performance

Applying Knowledge to Improve Organizational Performance

Objective	Example
<ul style="list-style-type: none">Effectively apply good practices from across the organization to improve productivity	<ul style="list-style-type: none">Ford
<ul style="list-style-type: none">Improve decision making at the point of customer contact	<ul style="list-style-type: none">General Electric
<ul style="list-style-type: none">Identify and leverage knowledge from outside organizations	<ul style="list-style-type: none">Eli Lilly
<ul style="list-style-type: none">Enable your partners and customers to work more effectively with your organization	<ul style="list-style-type: none">Cisco
<ul style="list-style-type: none">Preserve knowledge before it walks out the door	<ul style="list-style-type: none">Sandia

Ford Motor Company has leveraged communities of practice to support the organization's ability to share best practices

Case Example: Ford



- 21 active communities of practice
- Value delivered by knowledge shared has been \$1.3 billion in savings projected over four years with \$886 million realized as of 04/01
- 2,800 proven superior practices shared across manufacturing operations
- 5,000 average replications per year over four years. 8,000 replications in 2000
- Built stronger relations for Ford's 350,000+ employees around the world Healthier and safer people worldwide, especially as a result of the work of the health and safety community
- New revenue stream developed in the licensing or sale of the eBPR to Shell Oil and large parts manufacturers

Sources: Knowledge Management Review “Gaining Real Value Through Best-Practice Replication,” Stan Kwiecien and Dar Wolford, and “Ford’s Best Practice Replication Process,” Dar Wolford

General Electric has applied knowledge sharing concepts to a number of its financial services businesses

Case Example: General Electric Mortgage Insurance



We bring good things to life.

- Found that certain representatives were able to make better decisions about foreclosures than others
- Pulled 25 of these representatives off -line to turn "art into science" and document their decision processes
- Develop manual and software tools to guide decision making process based on tacit employee knowledge
- Avoided 1600 foreclosures, up 43% from the previous year
- Saved GE \$8 million by speeding up decision making and more accurately selecting loans that didn't require foreclosure
- Improved customer satisfaction (mortgage lenders) from 61% to 76%

Source: "GE Turns Decision Making 'Art' into 'Science'" *USA Today* 5/1/1998,

Eli Lilly has demonstrated the importance of knowledge exchange with strategic alliance partners

Case Example: Eli Lilly

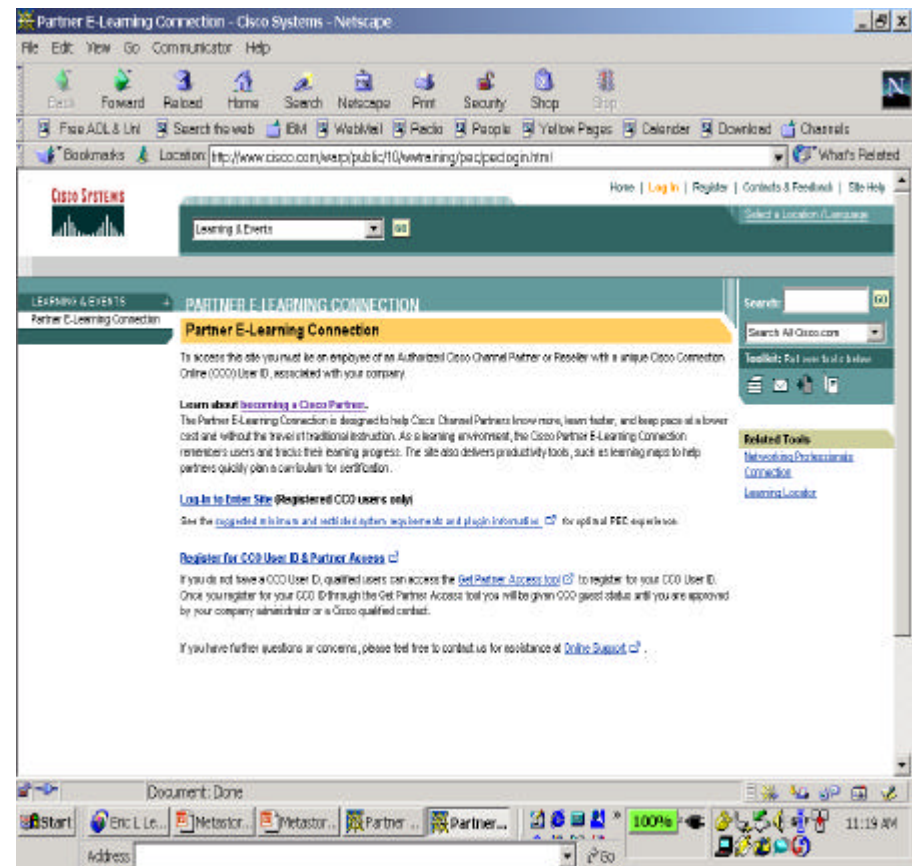


- Dedicated Office of Alliance Management
 - “Find it” team of over 20 research scientists looking for new opportunities
 - “Get it” business development team that review up to 1500 opportunities a year and complete 40 partnership deals
 - “Create value” group made up of over 140 alliance managers
- Focused “LAMP” (Lilly Alliance Management Process) and Alliance Toolkit used to streamline and simplify alliance management
- Three assessment instruments used to monitor strategic, operational and cultural fit and ongoing “health” of alliance
 - Involves partners in the measurement process
- Alliances supported development and launch of eight new products between 1995-2001 and as many as eight more in the next several years

Cisco has focused on using knowledge to make it easier for partners and customers to sell and use Cisco's products

Case Example: Cisco

- In March 2000, Cisco launched its Partner E-Learning Connection site, which provides online course for all Cisco technologies
- Provides upfront diagnostic testing to determine what courses are necessary for an individual to take
- Developed a 3-D virtual equipment lab, where students without access to a particular piece of Cisco equipment can view virtual equipment, as well as remove or install interface cards
- 74% of vendors reported an improvement in their ability to sell or service clients due to the E-Learning Connection



Sandia National Laboratory uses video to capture and share interviews with nuclear weapons designers

Case Example: Sandia National Laboratories

What have they done?

- Conducted interviews with 120 retirees
 - Sessions are scheduled in two-hour segments, although up to 20 hours have been devoted to interviewing a single individual
 - Typically, three designers are interviewed at a time to encourage interaction and increase problem solving visibility
 - Over 2000 hours of video captured
- Use Covera's Screening Room to digitize, store, and index video archives
 - Authorize users to access content
 - Isolate relevant information
 - View footage

"What we're doing is trying to capture their ideas, but more than that, their psyches, ***to try to learn not just what they did, but why they did things the way they did***; to find out what worked, what didn't work, what might have worked had the supporting technology been more advanced"

Keith Johnstone,
Co-Lead
Knowledge Preservation Project

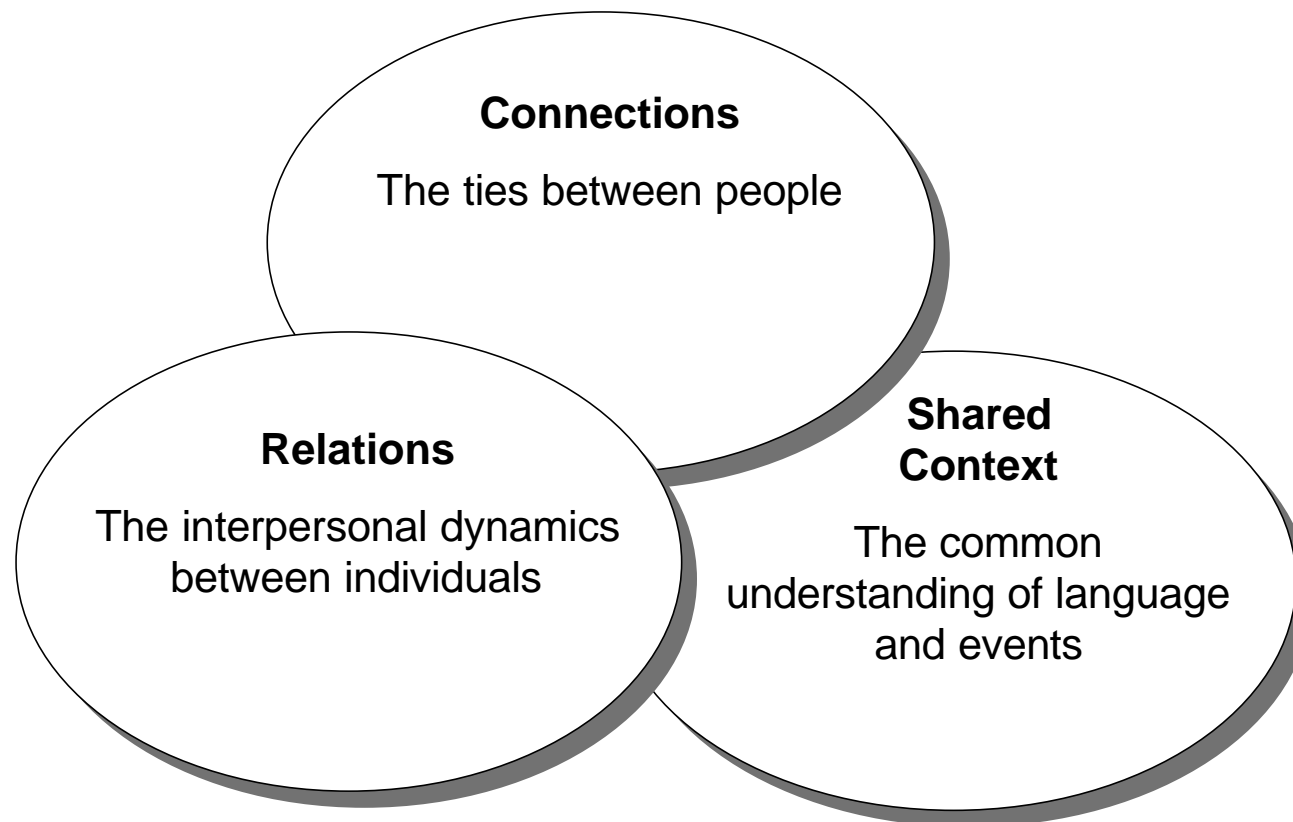


Sources: Lisagor, Megan, "Application Makes Video Library Manageable with Keywords" *Government Computer News*, December 11, 2000; Sandia National Laboratories Press Release, "Innovative Data Retrieval Technology Helps Preserve Weapons Technology, June 3, 1996, Caterinicchia, Dan, "Preserving knowledge" *Federal Computer Week*, August 13, 2001.

How does knowledge gets shared within and across organizations?

Knowledge management is heavily dependent on an organization's ability to build social capital among its employees

Social capital is the economic value created by maintaining and sustaining relationships inside and outside an organization



Source: Nahapiet, J. & Ghoshal, S. (1998)

At the firm level, knowledge efforts needs to help individuals find one another and develop connections and relationships

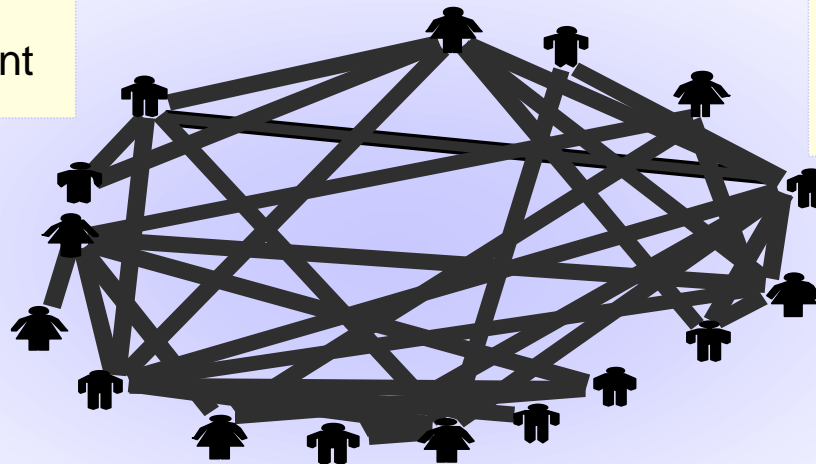
Key Reasons Why Social Networks Are Important

Where Work Happens

- Lack of boundaries
- Informal networks increasingly important

Where People Engage

- Join and commit to people
- Trust accrues in networks of relations



Where Knowledge Lives

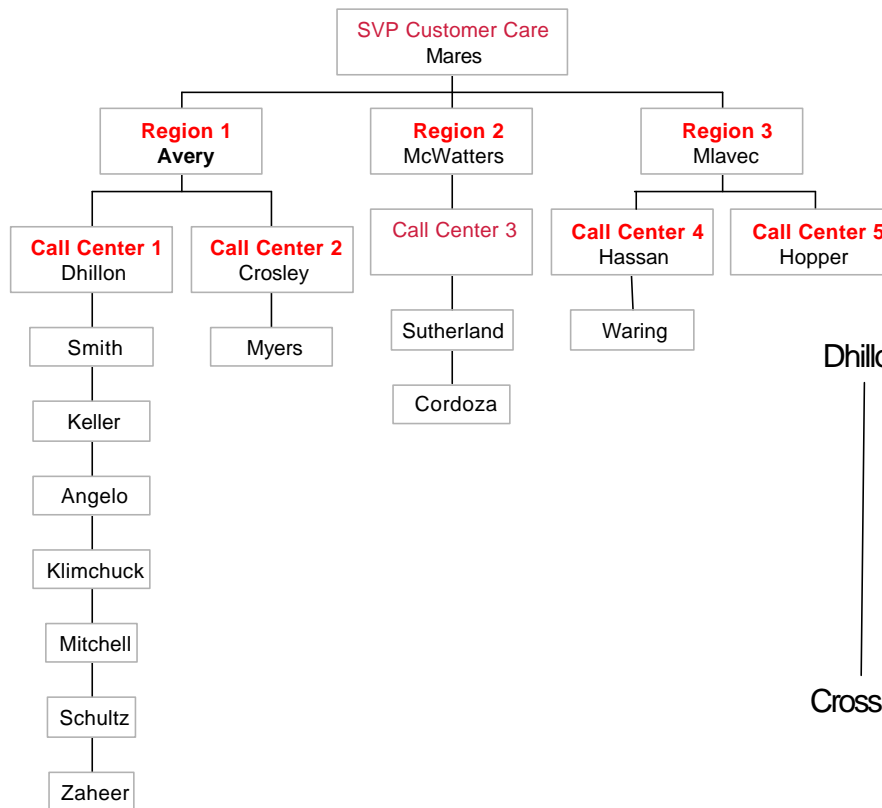
- Rely on people for information
- People can provide more than databases

BUT...

- Invisible
- At odds with formal structure

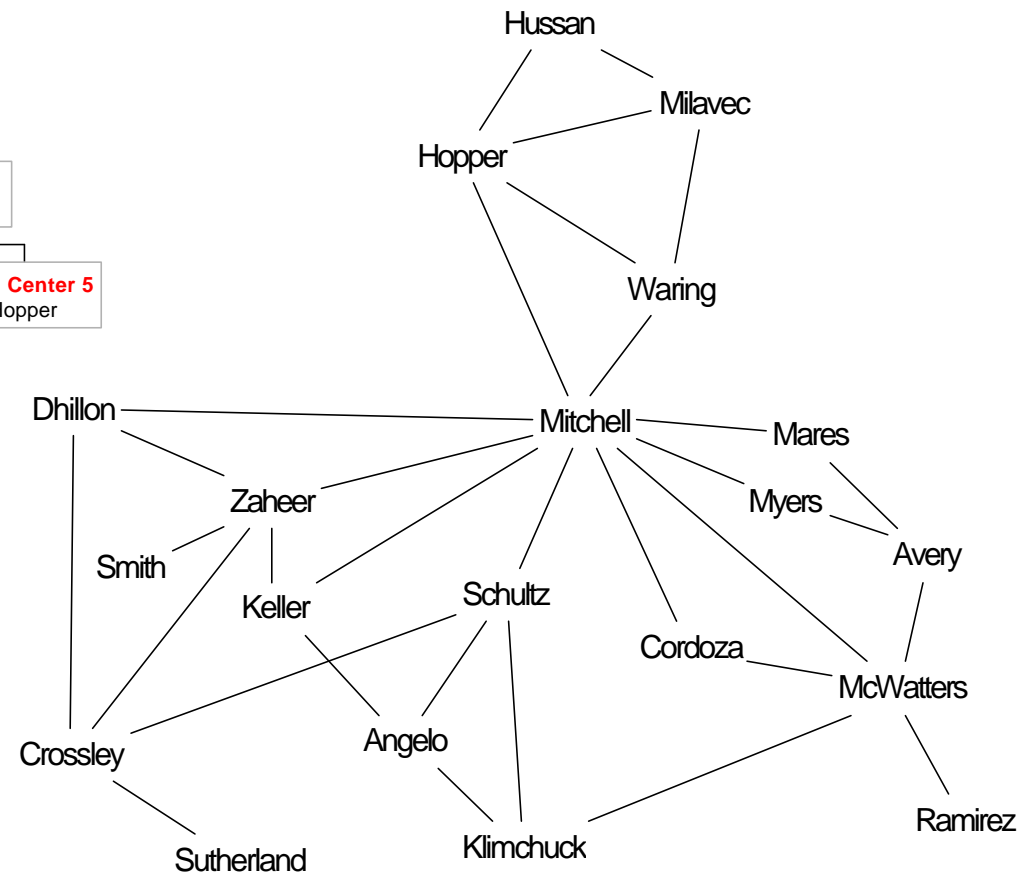
Getting things done often depends less on formal structure than an informal network of friends and colleagues

Formal Structure



Informal Structure

Who do you turn to for information to get your work done?



Trust is an important factor in influencing knowledge sharing between seekers and sources

Important Trust Factors



Shared Vision

Do we have the same perspective on the work at hand?



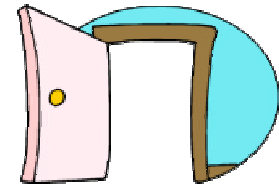
Shared Language

Can we understand each other's professional and cultural jargon?



Discreet Source

Can you keep a confidence?

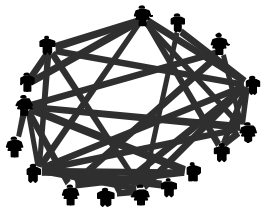


Receptive Source

Are you accessible and approachable?

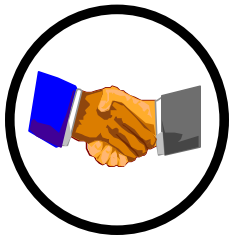
Technology can help maintain social capital and “keep the conversations going” beyond face-to-face encounters

Using Technology to Extend Social Capital



Connections

- Expertise locators
- Network analysis tools
- Buddy lists and presence indicators



Relationships

- Collaborative spaces
- Discussion boards
- Synchronous communication

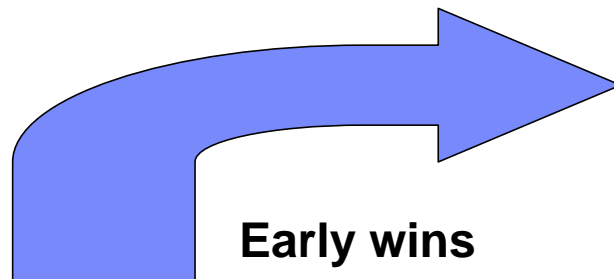


Shared Context

- Videoconferencing
- Multimedia
- Content management systems

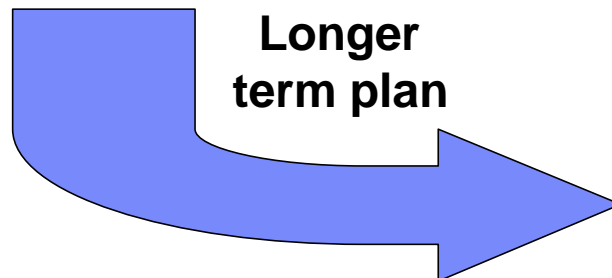
Organizations that are serious about implementing knowledge management should consider two parallel paths

Balancing Short Term Wins with a Longer Term Strategy



Pilot projects

- Knowledge retention
- Communities of practice
- Good practices sharing



Firm wide knowledge management strategy

- Current KM activities
- Vision of the future
- Action plan to close the gaps

Based on our research and experience, we have learned some important lessons about managing organizational knowledge

When Knowledge Efforts Do Not Succeed

- Failure to align knowledge management efforts with strategic objectives
- Creation of repositories without addressing the need to manage content
- Failure to connect knowledge management solutions to day-to-day work activities
- Underestimate the need for marketing, training and other change management activities
- Measures are not clearly identified and tracked to understand necessary changes and link to business benefit

Based on our research and experience, we have learned some important lessons about managing organizational knowledge

Key Knowledge Management Lessons

- We learn from each other and through stories
- Knowledge accumulates in networks and communities
- Access to knowledge does not equal value
- Technology alone does not change behavior
- Context is as important as content
- Knowledge is not free; it requires development, maintenance and transfer costs
- Nothing happens without trust